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ABSTRACT

These activities are part of a series of 17 teacher-developed instructional activities for geography at the secondary-grade level described in SO 009 140. The activity involves students in the use of maps as a source of information about American social and economic history. It outlines six learning activities which employ inductive methods. Given specific map information, students draw generalizations about the following topics: (1) expansion west of the Appalachian mountains in the early 1800s; (2) the logic of work place and residence patterns; (3) where people choose to live; (4) railroad lines on the eve of the Civil War; (5) farm protest movements; and (6) social patterns in a city neighborhood. Background and procedures for each learning activity are specified and maps are provided. (DB)

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National Council for Geographic Education

Instructional Activities Series IA/S-12

USING MAPS AS EVIDENCE:
LESSONS IN AMERICAN SOCIAL AND ECONOMIC HISTORY

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The authors outline six learning activities in which maps provide the source of information. This inductive approach to teaching should prove helpful to both history and geography teachers.

Maps can present historical evidence which can be used much as other kinds of historical data. Their interpretation can pose many of the same problems as other kinds of data, but basically they can serve the same functions as other types of evidence. At the same time, they provide some interesting instructional benefits not always possessed by documentary evidence. Their more concrete symbols, for example, are frequently easier for poor readers to interpret than the more abstract symbols of the printed word. They can be a very open-ended type of evidence. They provide stimulus variation. They help sharpen the observer's visual perceptions and sophistication. They are effective in involving student interest. Most important, working with map evidence frequently engages students in a more active type of learning.

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Like other kinds of historical evidence, maps can be used as the basic instructional tool; or they can be casually supplementary. They can be used in description or analysis. They can be used inductively or deductively. While we do not believe that there is one orthodox way to utilize maps, we feel their greatest potential is likely to be achieved through using them inductively, as evidence.

It would be both pretentious and untrue if we were to suggest that what we propose is an enormously novel departure from practices which can be observed already in some geography or other social studies classes. Nevertheless, what we are about sometimes suffers from over-exposure to a term,

induction, which by now is largely a catchword. Accordingly, one might overlook the degree and kind of differences that exist between using maps inductively as historical evidence and using them in the way they are commonly presented in our textbooks and classroom atlases.

Attention to the function of maps in most, if not nearly all, textbooks will demonstrate that maps are too often strictly supplemental to the text; they are not used as evidence at all. If they are used as evidence, they are normally used as descriptive evidence, or as verification of a generalization drawn in the text. In other words, they are used deductively. A generalization is stated, and the map evidence provides the specific examples. The present lessons are devised to teach inductively. They provide the specific evidence with which the students can work and out of which they can draw appropriate generalizations. We think that is better.

Building an inductive, generalization-oriented lesson from maps is much the same as building such a lesson from, say, documentary material. Careful choice of evidence is just as necessary. Particularly critical are the teacher's phrasing of questions and stating of issues for the students. In addition, just as is the case with documentary evidence, if one wishes to build a lesson around the evidence, one usually will want several pieces of evidence to help structure the lesson. Unfortunately, the location of suitable maps is no easy task. The large scale maps which are the most useful are hard to come by. Finding maps useful as historical evidence is at least as difficult as finding useful documentary evidence. It involves considerable research efforts. Fortunately, most of us find the research itself at least as interesting in the one case as in the other.

The lessons that follow will draw upon maps contained in the back section of this paper. The reader should refer to the maps suggested for each lesson.

LEARNING ACTIVITY 1

Expansion West of the Appalachian Mountains Followed a Pattern

Refer to maps 1, 2, 3, and 4 for this activity.

From the evidence these demographic maps provide, one can infer that in the early 1800's, settlers tended to follow the waterways in this spreading out into the Frontier and the establishment of permanent settlements.

Simple and straightforward as this generalization is, it is central to understanding Fredcrick Jackson Turner's themes on how early settlement patterns were largely determined by geographic features, particularly rivers. Likewise, the social, economic, and political implications of this pattern are important in understanding how the Frontier developed as a distinct region with its own peculiar interests. Regionalism was another of Turner's important themes and was a significant factor in the coming of the Civil War.

The teaching strategy might be simply to ask the students if they can see any pattern of settlement develop over the period of time indicated. Clarify the density code if necessary. Remind the students that the area under consideration is the Frontier, i.e. the area west of the Appalachian Mountains indicated by the ridge line. Point out, if necessary, that a pattern

involves heavier density. Should the students need more direction, ask that they generalize where people are to be found and where they are not.

With the primary generalization achieved, one might ask what might result from this pattern? Economic implications? Political? Regional? Social?

Another, quite different, settlement pattern will appear west of the Mississippi after 1860.

LEARNING ACTIVITY 2

The Logic of Work Place and Residence Patterns

Refer to maps 5, 6, 7, and 8 for this activity.*

Three useful generalizations can be inferred from this set of maps: 1) Businesses, especially service industries, tend to locate near their customers, other factors being equal. 2) Because of varied patterns of customer location, some types of business will be dispersed throughout a metropolis. Others will be concentrated. 3) In places or times without inexpensive public transportation, workers will generally have to live within easy walking distance of their place of work.

Background

The population of New York City in 1840 was approximately 312,000, largely concentrated south of 14th Street. As late as 1840, most of New York's industrial workers were handicraft artisans and lived in or very near their place of work. Public transportation did not exist until 1786, when private hackney service was begun. Twelve-passenger vehicles were introduced for service on Broadway in 1827 and the larger omnibus in 1831. By 1833, there were 76 coaches operating the city; and by 1845, twelve omnibus lines operated 251 vehicles. Fares during the time were 12 1/2¢, one way, which would obvously be a prohibitively large portion of a shipwright's pay of $1.75 per day. When students consider the practical advantages of living close to work, they may forget this one: the normal work day was 12 to 15 hours.

The area of concentration in 1800 of shipwrights and ship carpenters was different from the area of concentration in 1840. By 1840, the major portion of the ship building industry had moved north and east in response to the rapidly increasing prices of water front property, which in turn reflected the northward expansion of the business district from Wall Street.

Procedures

It might be useful to begin by measuring distances in order for the students to get a notion of the scale of the maps and of the small distances involved. This aside, one might ask the following questions: Consider the location of business places. Why are they located where they are? Why are the bakeries so dispersed and the engravers so concentrated? Consider the places of residence. Why are they not scattered throughout the city?

* Reprinted from The Spatial Dynamics of U.S. Urban-Industrial Growth, 1800-1914: Interpretive and Theoretical Essays, by Allan R. Pred, by permission of The MIT Press, Cambridge, Massachusettes.

LEARNING ACTIVITY 3

Where People Choose to Live: Ethnicity in Blooming Grove, Wisconsin

Use maps 9, 10, 11, and 12 for this activity.

Sociologists know that one of the very best predictors of where people will choose to live is ethnicity. For a variety of reasons people will tend to live with others of their own ethnic group. Nor is this generalization limited in applicability to Europe or the West. Useful as the generalization is, it is normally associated with urban settlement patterns. The Blooming Grove case study suggests that the same principle operated in rural frontier areas as well.

The central generalization of this lesson is that ethnicity strongly affects choice of residence location. The natural consequence of this tendency is the formation of clusters or neighborhoods of members of the same ethnic group. An important expansion of the same principle is its utility in identifying settlement patterns in a developing rural frontier.

Beyond these central notions, the map data also suggest some intriguing patterns which might be explored, especially the following: the fairly rapid turnover of land ownership over a period of 10 to 20 years, and the changing patterns of land cultivation between 1860 and 1870.

Background

Blooming Grove is a township in south-central Wisconsin contiguous to the capital city of Madison. Students might be interested in these maps for their view of the township system of land division, which students will have read about in conjunction with the various Northwest Ordinances. Following the system prescribed by the Ordinances, the township measured six miles by six miles, having 36 sections of 640 acres each. Students may notice how few settlers here were able to purchase a full section. Most farms were quarter sections (160 acres) or small by 1860.

Blooming Grove was opened for sale by the Federal government in 1835. By 1837, more than half the land area had been sold. Since the first permanent settlement probably occured in 1841 and grew very slowly thereafter, it should be apparent that most original land purchasers were land speculators. And that was the case. In fact, a look at the map of 1850 shows that most of the township was owned by non-residents and not cultivated. Much of the speculation was stimulated by the announcement of the establishment of the capital at Madison.

In this series of maps, we can trace the filling up of newly opened land and its development into a settled rural area.

Strategy

It is probably necessary to clarify some matters before the students begin analysis. You might wish to tell the students where Blooming Grove is located. Remind them of what a township is.

Point out the legend and clarify what seems necessary. Some items worth noting: a) The dot pattern for both the Americans and the Irish appear similar because of reproduction. The Americans can be identified by their state key identification. The Irish, who seem to have the same dot pattern, do not have any letters within their plot. b) Arrows joining plots indicate that the same owner owns them. c) During the period treated by the maps, all the land in the township was owned by somebody. In 1850, the Federal government still owned some land it had not yet been able to sell. By 1860, all the land had been sold to private individuals. Uncultivated land was also unoccupied which meant that it was owned by an absentee owner. d) You may need to explain that Baden and Prussia were two separate kingdoms which are now part of Germany. They are at different extremes of modern Germany in more ways than one -- Baden being in the South and Prussia being in the North. (In 1850, the data does not discriminate between Germans from Baden and Prussia.)

With preliminaries out of the way, one might choose to take a very direct approach and ask students what groupings they see developing over the period of 30 years and why they think these groupings emerged.

Alternatively, one might follow this sequence: 1) Groups tally the settlers by ethnic origin. (1850 could be treated alone; 1860 and 1870 could each be divided into quarters and one group would tally one quarter.) This would draw the students' attention to ethnicity, underscore heterogeneity, and document a changing native/immigrant ratio. 2) The same groups working with their same quarters could identify and describe which is/are the dominant ethnic group(s) in their area. Are any ethnic groups under-represented? 3) Ask the class, why these groupings, these patterns?

In addition, or alternatively, one might develop hypothetical cases for 1850 and 1860 and test their accuracy. "If you were a German buying land on which to settle, which plot would you prefer?" And the like . . .

At a later stage, one might also put groups to work on apparent changes of ownership between two decades or over three, on the changing patterns of land usage--plots being in cultivation at one period, out of cultivation at another--or on the changing ratio of American natives to immigrants.

LEARNING ACTIVITY 4

Railroad Lines on the Eve of the Civil War

Refer to map 13 for this activity.

Everyone knows that one of the most severe handicaps under which the Confederacy had to conduct the Civil War was its inadequate railroad network. The present map, however, allows for a much more specific and sophisticated understanding of the real dimensions and characteristics of the problem.

Track mileage and density are the most familiar aspects of this probelm. Consideration of the map should also make manifest the following: The directional orientation of Southern trackage created strategic handicaps for the South. Confederate trackage was frequently inadequate to supply the areas where most fighting took place. Finally, the use of different track gauges caused particular havoc with the utility of the railroads as an integrated regional network.

Procedures

One might simply ask the students how they would characterize the differences between the rail networks in the North and in the South. This might elicit all the desired generalizations. More likely, students will notice the mileage and density differences quickly, but other generalizations can be elicited by a series of logistical problems, such as: How would one get supplies between Atlanta and Raleigh, between Montgomery and New Orleans, between Jackson, Miss. and Mobile, Ala.? And so on. Then one might ask for the causes of problems. Was direction of the tracks a problem? Why? And the like.

One might explain the significance of varied track gauges from the first. On the other hand, it might make the point more vividly if the explanation is saved until students accidentally plot a direct route which proves to be impractical because of incompatical track gauges.

LEARNING ACTIVITY 5

Farm Protest Movements: Who Are the Radicals?

Refer to maps 14, 15, 16, and 17 for this activity.

In American history, protest movements are more likely to begin among those who are comparatively better off, less afflicted, higher in status, rather than among those who are the most grievously afflicted by social ills. It was, for example, the elite among the working class who organized into successful unions.

This series of maps will demonstrate this phenomenon in the case of a farmers' protest movement in Minnesota. In that situation, it was farmers from the more prosperous portions of the state who were the most militant and took the most direct action rather than the farmers from the least prosperous counties in the state.

At the same time, the map evidence allows for a more subtle understanding. As is normally the case with social phenomena, the generalization is useful, but not perfect. Thus, while it was generally the most prosperous counties which were most affected by militant protests, not all the prosperous counties were so affected. Similarly, while a poor crop yield was also characteristic of the protesters, some of the protest areas had a good crop.

Background

These maps provide part of the scenario of a farm protest movement which occurred in Minnesota during 1932-34. With the nation in the throes of the Depression, farmers were particularly hard hit. What burdens seemed most grievous to them were low prices for their produce and foreclosures on their mortgages. In this unhappy situation, farmers had expressed their pain and resentment in many ways and through many farm organizations. One of the most dramatic protest movements was spearheaded by the Farmers Holiday Association, an informal adjunct of the Farmers Union.

The FHA was a relatively short-lived group which sprang up in several Midwestern states, flourished for a time, and then ran out of steam as a seperate organization. While it lasted, however, it captured the imagination of some farmers and the headlines of newspapers. Its chief programs were directed against the problems of prices and mortgage foreclosure. One program involved the withholding of crops from market. The name, Farmers Holiday, was in fact a conscious allusion to Roosevelt's "Bank Holiday." As can happen in such circumstances, farmers who withheld their own produce sometimes decided to make certain that other farmers did likewise; and some violence ensued. Another program of the FHA was enactment of a moratorium on mortgages foreclosures. Some slight relief was provided by the state legislature, but not enough. Frustrated, desperate farmers sometimes threatened foreclosure officials or potential purchasers, and sometimes violence and rioting occurred.

Such militant activities did not take place evenly throughout Minnesota. As can be seen from the maps, "farm holiday" activity in the state was quite localized. Moreover, the most intense militancy--the enforcement of the "holiday" and the erruption of foreclosure riots--was even more localized in the state. The data of these maps will allow students to test some hypothesis about why the greatest militancy was located where it was.

Reasons for the eclipse of the FHA were several: The Association did not unify enough farmers in the state; farm prices rose somewhat by the end of 1933; the AAA paid farmers to reduce wheat acreage; and farmers were ready to turn to political action rather than direct action, with various farm groups working toward the formation of the Farmer-Labor Party

Procedures

It is probably best to provide students with so much of the background data as they do not already know.

Then the basic question might be asked: What were the economic characteristics of the most militant farmers? Probably the easiest way to go about the analysis would be to have students test some hypothesis:

1) The least prosperous farmers will be the most militant.
   - Land value is a generally reliable index of prosperity. The lower the land value, the lower the level of prosperity, and vice versa.
   - High rates of tenancy are also generally indicative of high land value and concomitant prosperity, but students are not so likely to know that. In the popular mind, tenancy is associated with lack of prosperity, but in reality, the reverse is the case. Some factors, for example, which help create this situation are: Prosperity brings in outside capital; prosperity allows the prosperous to expand or even retire, renting to others in either case; expensive land makes renting necessary for the individual without large capital resources. To avoid confusion, this index of prosperity might be ignored.
2) Farmers who have poor year for crops will be likely to be most militant.
   - The crop success map would be appropriate for this analysis. Crop failure has the potential for fomenting farmer militancy, but the map study will indicate that the effect is not completely predictable.

3) Those counties with the largest percentages of tenant farmers will have less militancy because tenants will be less concerned than owners who live on their land.
- One might wish to mention that tenancy is not necessarily associated with poverty. On the contrary, the counties with the highest rate of tenancy were generally those counties with the most prosperous farms.

Throughout the hypothesis testing, the farm holiday activity map is the base map for comparison.

Naturally, if the hypotheses above are not found to be true, students then must try to formulate a more tenable hypothesis.

LEARNING ACTIVITY 6

Social Patterns in a City Neighborhood

Refer to maps 18, 19, and 20 for this activity.

The present set of maps admirably provides evidence for four interrelated predictive social patterns which affect the social make-up of communities. As interesting and useful as each pattern is, one of the virtues of this data is that it demonstrates both the patterns and their interplay. In addition, analysis of the data also shows that while significant patterns exist, in a given community there are likely to exist some exceptions to the patterns.

The four generalizations are the following: 1) People tend to reside near others of their ethnic group. 2) People tend to reside near others of their own socio-economic stratum. 3) Ethnicity is frequently associated with socio-economic status; Blacks are more likely to have low socio-economic status. 4) In a given community, the better housing is likely to be occupied by those of higher socio-economic status, and vice versa. And, of course, all of these factors are inextricably interrelated.

Background

The West End was a comparatively small district behind Beacon Hill and near the central business district of Boston. Close as it was to the business district, until the early 19th century the West End had been an isolated farm area. As it was built up during the 19th century, it tended to be filled up with high density, low income housing of three and five stories. Most buildings were what were called tenements in New England. What made a building a tenement was its small scale and its meager amenities rather than dilapidation and neglect. Tenement apartments normally contained three or four small rooms with shared toilet facilities. Apartment houses, so-called, were larger in scale with more amenities, although in the West End they were far from luxury accomodations. They would be likely to have apartments of five or six rooms with private bath. The number of such buildings in the area was comparatively small. Some streets had small shops on the ground floor with tenements above.

One of the things with which we will be concerned in this lesson is socio-economic status. There was a mixture of strata within this small community, but the

strata were all to be found within the lowest one-third or one-fourth of possible strata. The West End was a working class neighborhood.

Procedures

Some of the background data above might be of interest to students. As regards the interpretation of the various map legends, it might be better to explain them needed while working through the sequence of activities.

Step one might be to divide the class into seven groups. Each group will study the residents of a few blocks of the area, keeping their same area through the several stages. The groups follow:

a) Myrtle Street, both sides.
b) Cambridge Street
c) Revere Street
d) The four northwestern most blocks, excluding Cambridge Street and Revere Street, but including the north side of Anderson Street.***
e) Five blocks, including the south side of Anderson Street and both sides of Irving Street.***
f) Russell and Joy Streets
g) Hancock and Temple Streets

*** These are more complicated cases for your better students.

Problem one concerns ethnicity. Each group should study its own area to determine what nationality groups live in their area. Which group might be dominant? What clusterings exist? It might be useful to begin a table on the blackboard so that students can report on their own area and their conclusions entered on the table. Once the patterns are identified, the question is, why the patterns, the groupings? If students have already done Blooming Grove, they will be familiar with the sociological principle. (Parenthetically, all the Russians were Jews.)

Problem two concerns socio-economic status. Again, students should study their own area and identify what are the dominant occupational groupings. These conclusions can also be entered in the table. Two issues might be clarified: the relationship between SES and occupation, with the concomitant hierachy of strata, and the fact that all the occupations present here are the low end of possible strata. The "white-collar" workers were almost all clerical workers, clerks, bookkeepers, and the like. They are higher in status than unskilled workers, but still of low status. The instructional procedures would be similar to those for problem one.

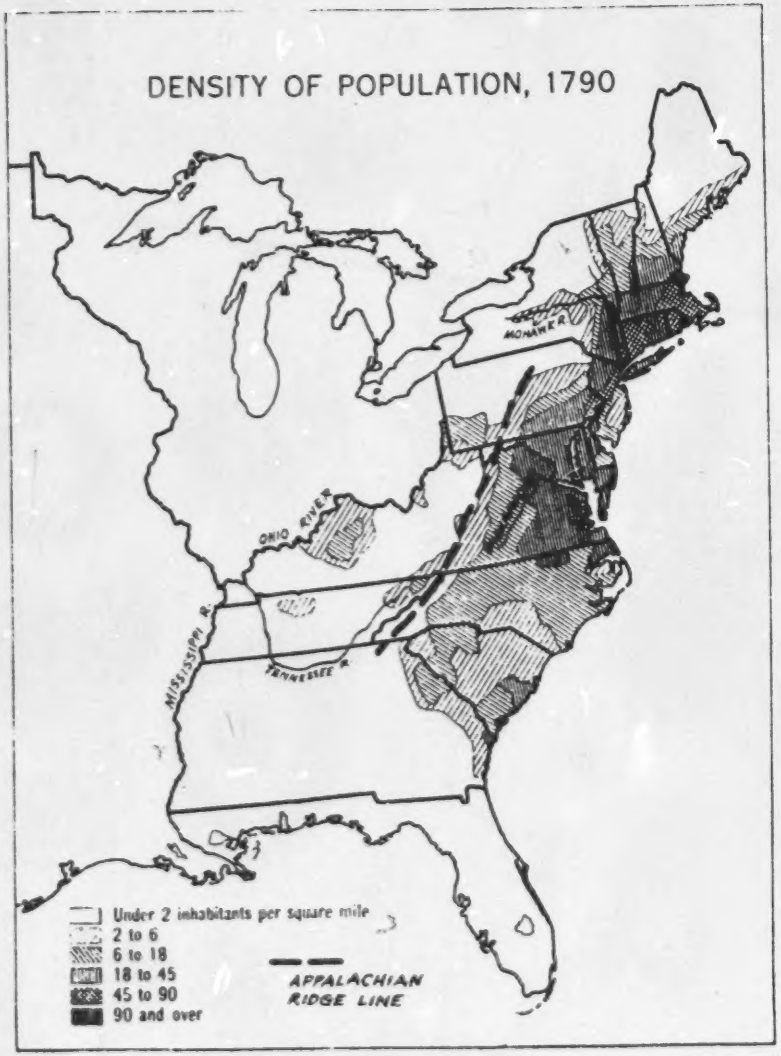
Problem three concerns the association of ethnicity with SES. Students should compare the occupations and the ethnicity of the residents of their area, looking for patterns. Considering the tabular data, the question of whether jobs (SES) are more frequently associated with some ethnic groups rather than others can be broached.

Problem four involves considering the relationship between type of housing and SES (jobs).

Before one leaves off, the interrelationships among these four factors should be considered. With the data tabulated, the most general patterns can be identified by students.

For eight months in 1957 and 1958 a sociologist, Herbert J. Gans, lived in and studied the West End. His report of that participant-observer study, The Urban Villagers (New York: The Free Press, 1962), is most interesting and enjoyable. Large portions of it can be read by better students. Small doses of it are useful with all students.

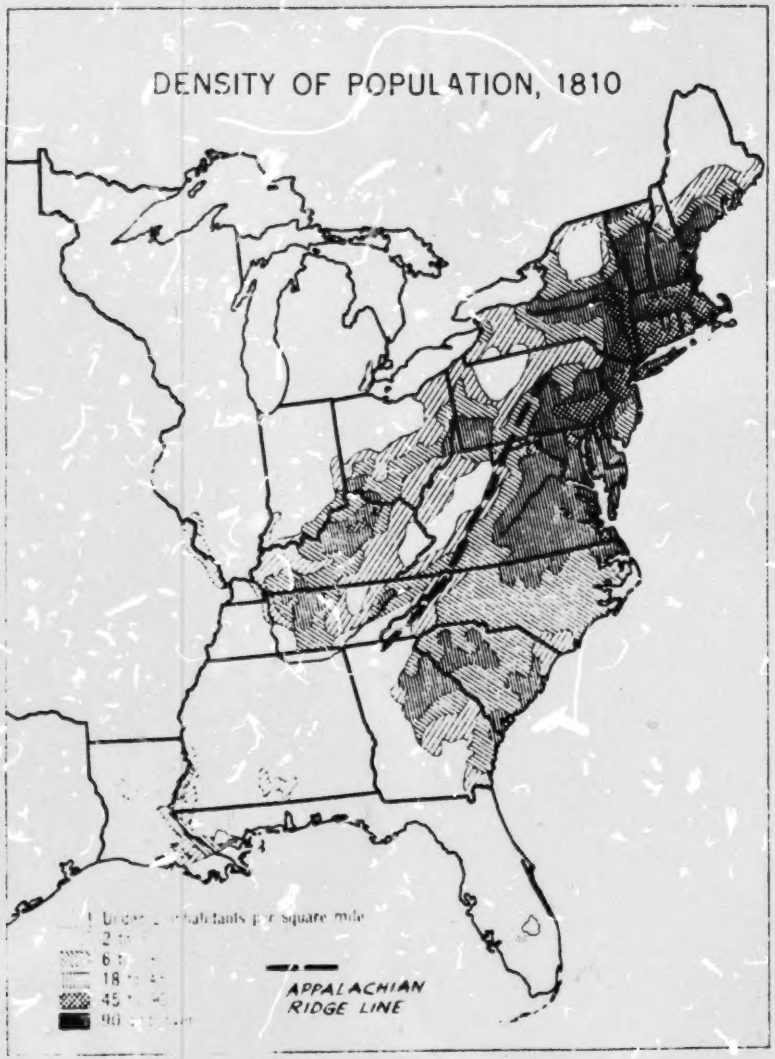
Map 1


DENSITY OF POPULATION, 1790
MOHAWK R.
OHIO RIVER
MISSISSIPPI R.
TENNESSEE R.
Under 2 inhabitants per square mile
2 to 6
6 to 18
18 to 45
45 to 90
90 and over
APPALACHIAN RIDGE LINE

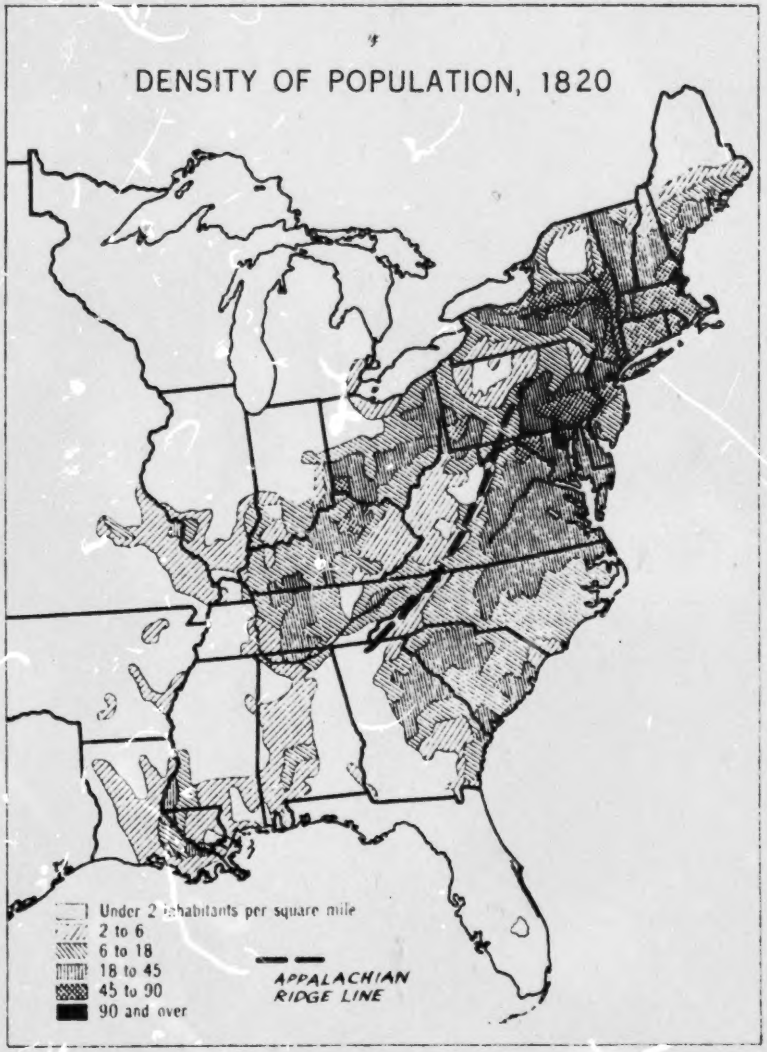
Map 2

DENSITY OF POPULATION, 1800
OHIO RIVER
MISSISSIPPI R.
TENNESSEE R.
Under 2 inhabitants per square mile
2 to 6
6 to 18
18 to 45
45 to 90
90 and over
APPALACHIAN RIDGE LINE

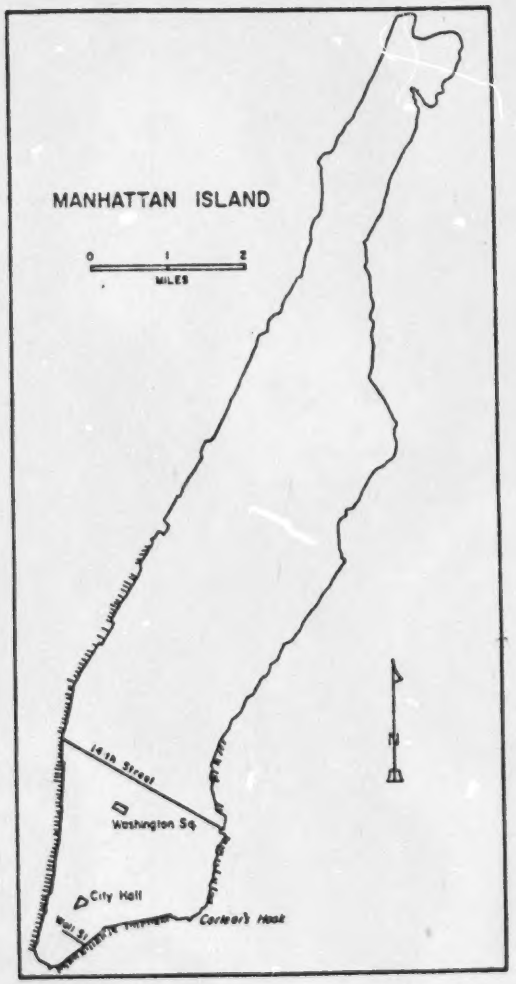
Map 3


DENSITY OF POPULATION, 1810
APPALACHIAN RIDGE LINE

Map 4

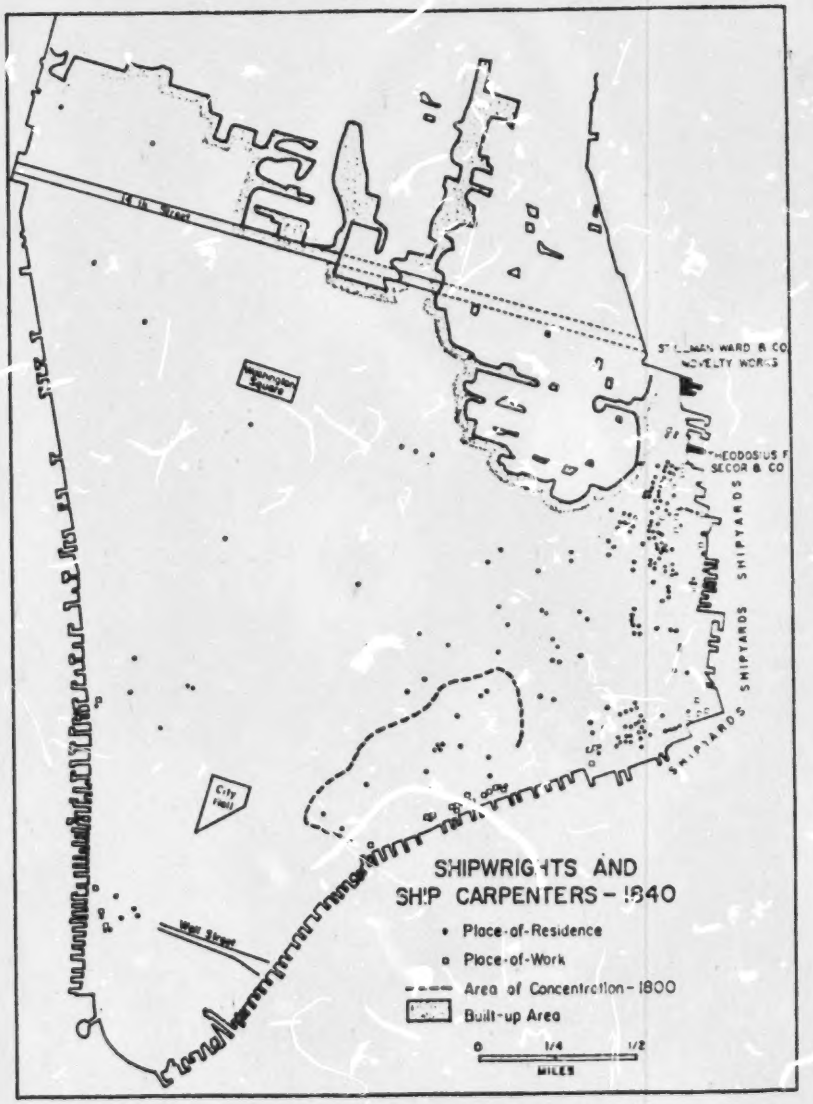

DENSITY OF POPULATION, 1820
Under 2 inhabitants per square mile
2 to 6
6 to 18
18 to 45
45 to 90
90 and over
APPALACHIAN RIDGE LINE

Map 5



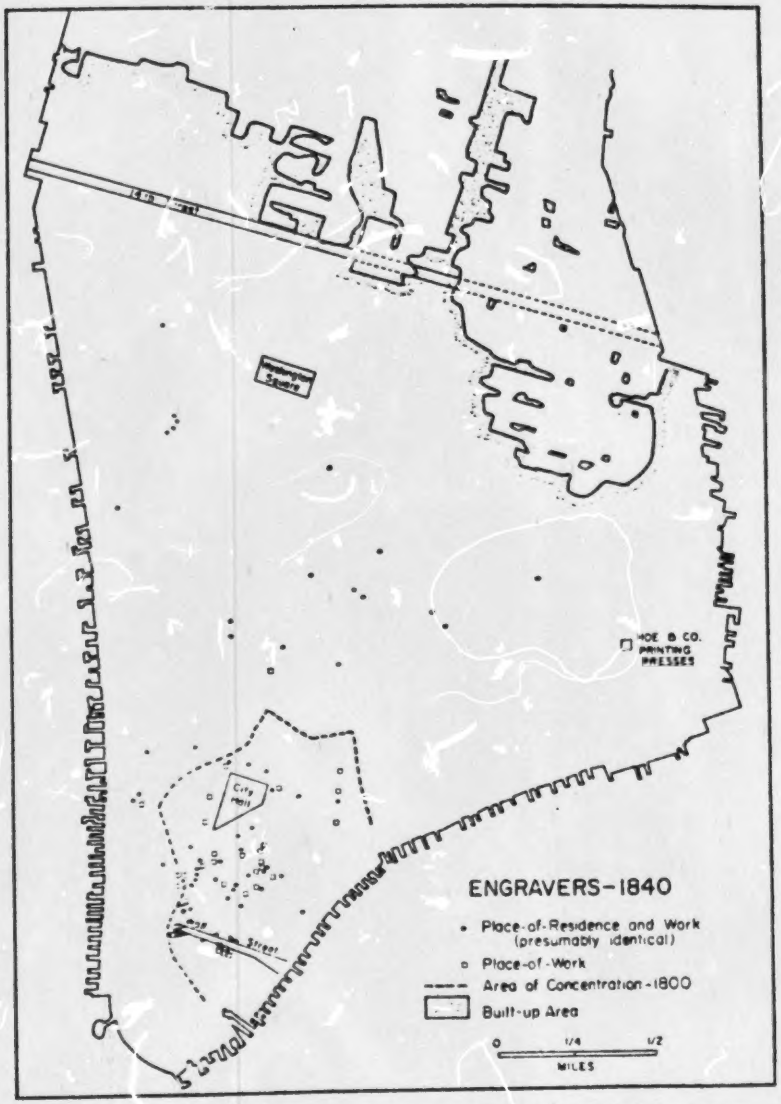
Contemporary reference map for Map 4.5.

Map 6



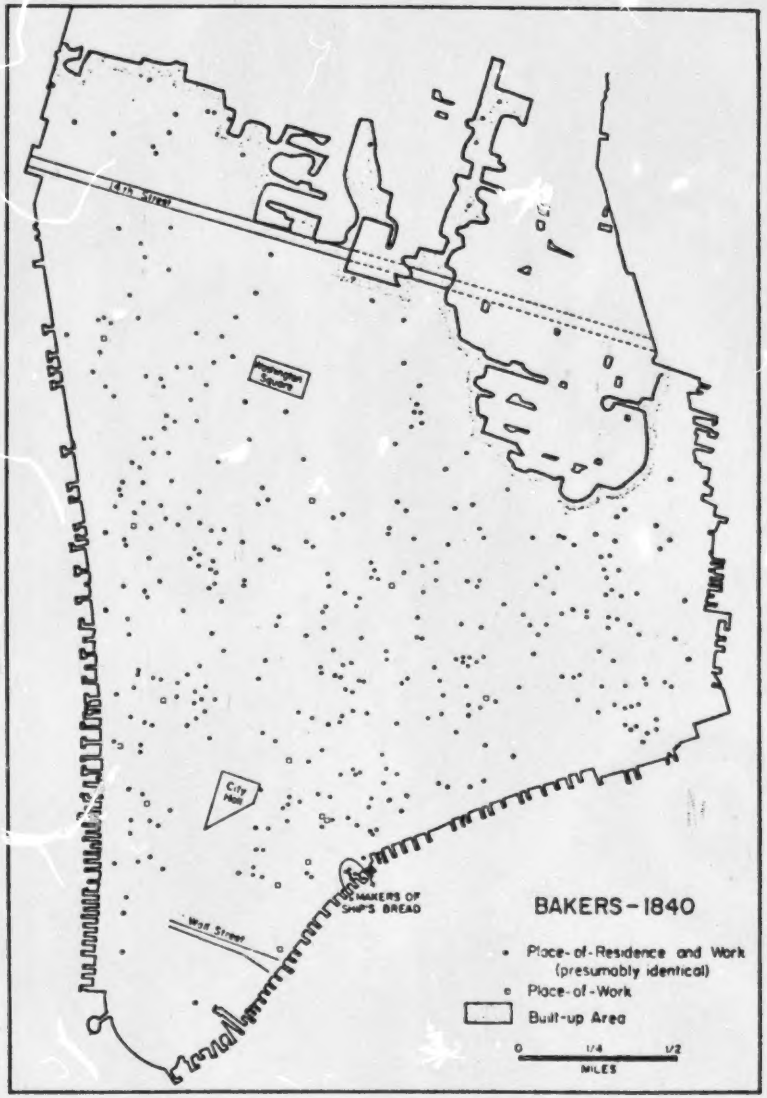
MAP 4.5 The location of New York's shipwrights and ship carpenters in 1840. The delineated area of concentration for 1800 encompasses approximately 87 per cent of the city's known shipwrights and ship carpenters at that date. The area to the east of the 1800 area of concentration was filled subsequent to the turn of the century.

Map 7



The 1840 location of engravers in New York. The delimited area of concentration for 1800 encompasses approximately 96 per cent of those known to have been employed in *all* printing trades at that date.

Map 8



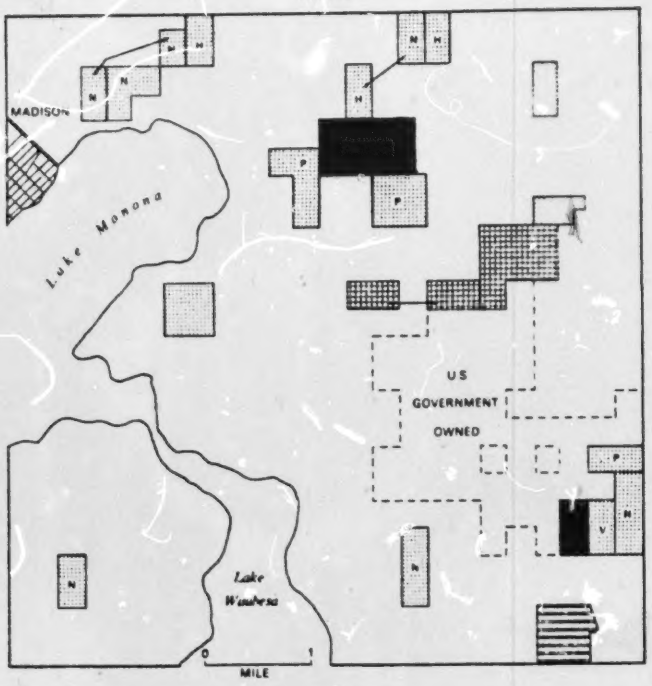
The 1840 location of bakers in New York.

Map 9

Map 10

DISTRIBUTION OF FARMER ETHNICITY

1850



AMERICAN
C Connecticut
H New Hampshire
ME Maine
MS Massachusetts
N New York
O Ohio
P Pennsylvania
V Vermont

CANADIAN

ENGLISH

IRISH

GERMAN
B Baden
PR Prussia

SCANDINAVIAN

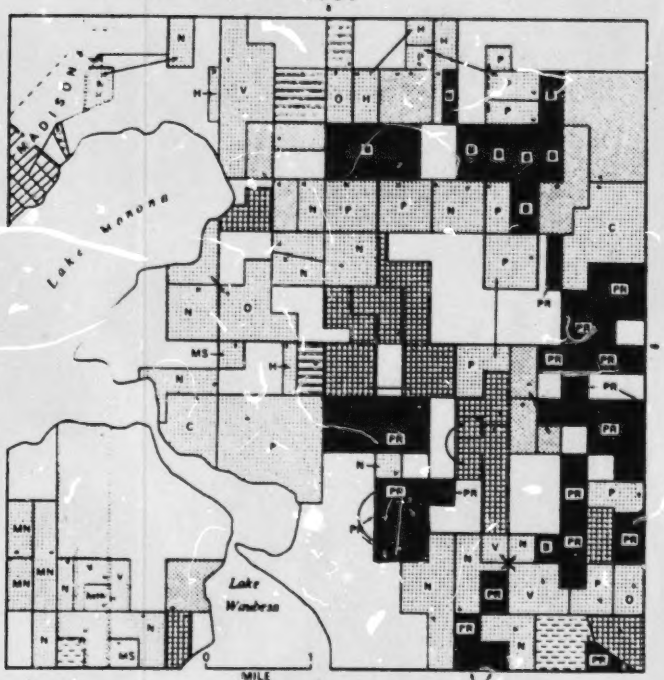
OTHER

OWNED BUT NOT FARMED

DISTRIBUTION OF FARMER ETHNICITY

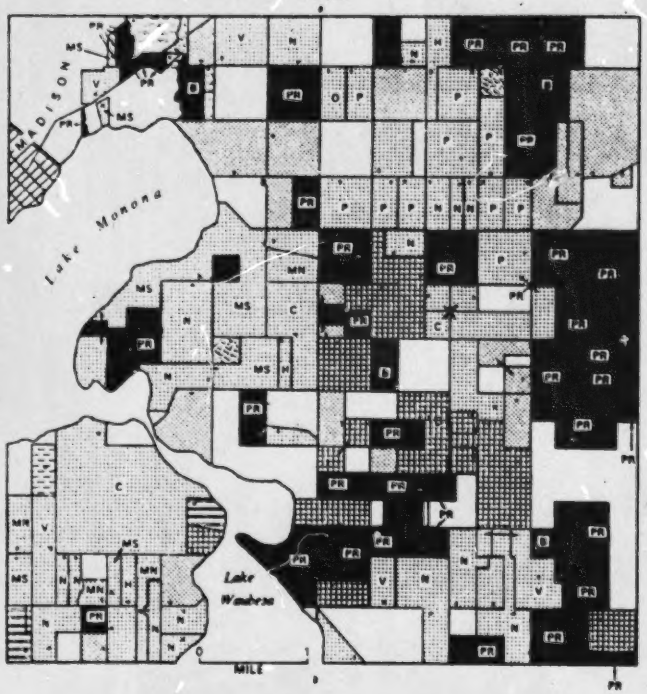
Map 11

1860



Map 12

1870



AMERICAN

C Connecticut
M Maine
MS Massachusetts
N New York
O Ohio
P Pennsylvania
V Vermont

CANADIAN

ENGLISH

IRISH

GERMAN

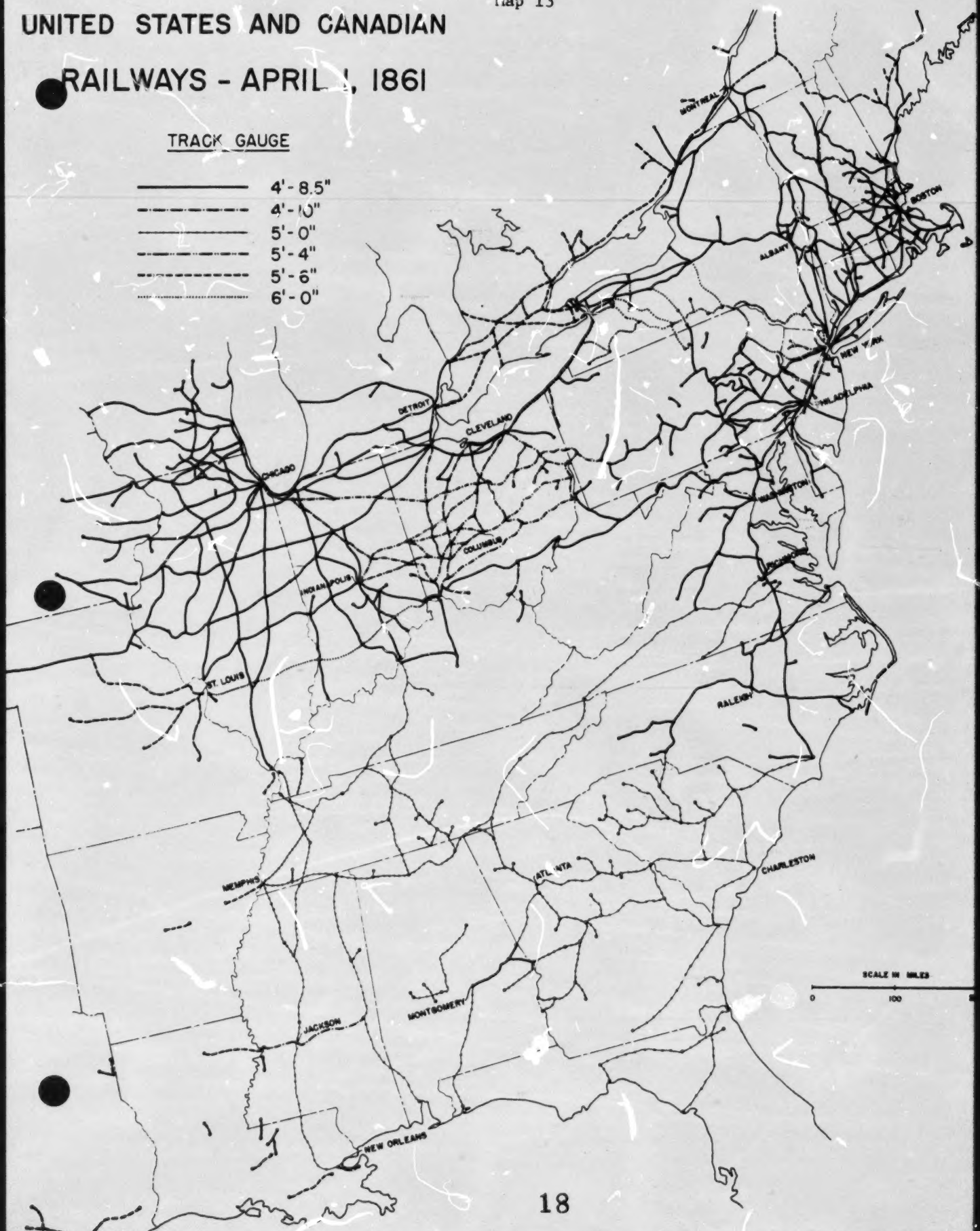
B Baden
PR Prussia

SCANDINAVIAN

OTHER

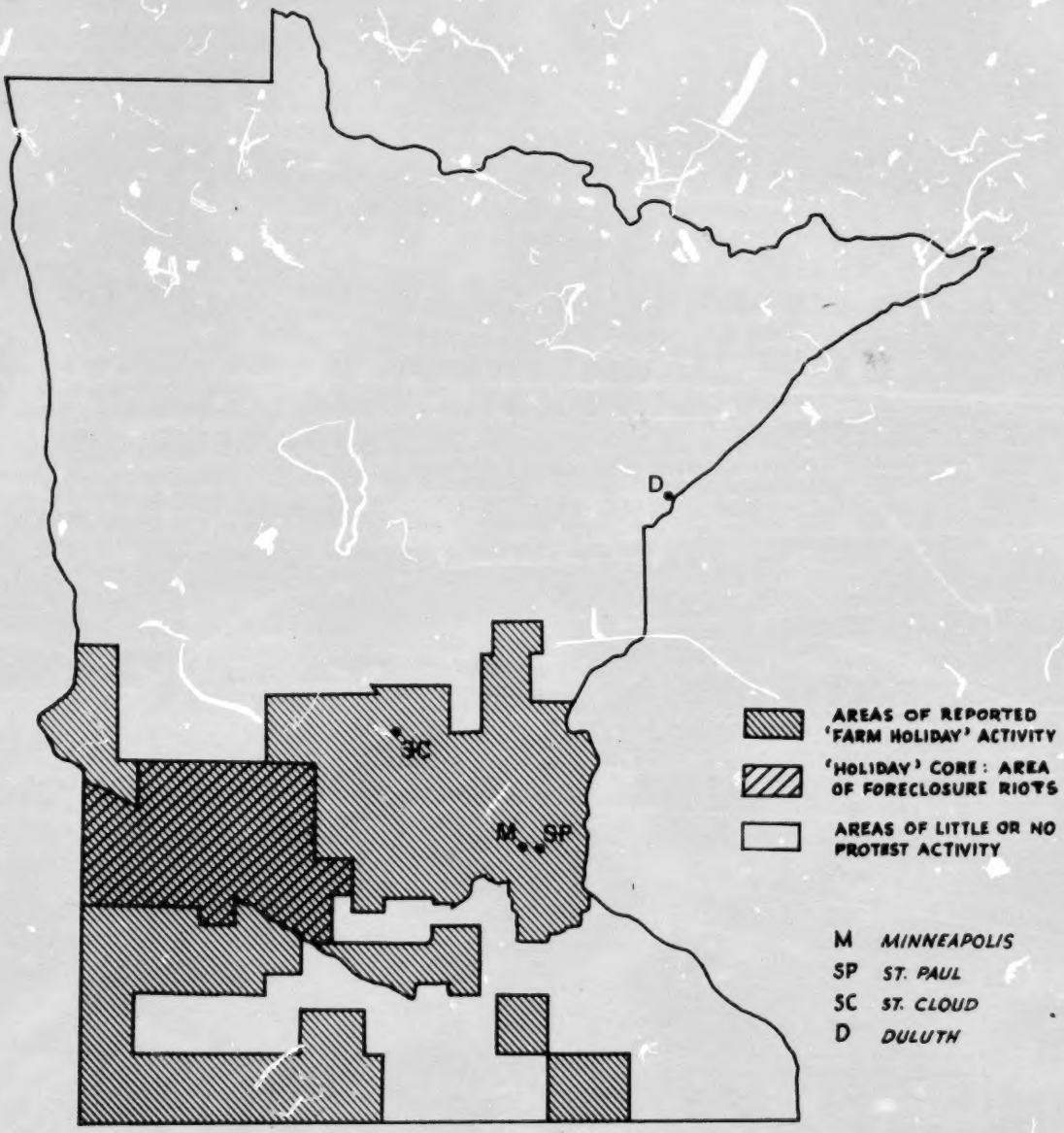
OWNED BUT NOT FARMED

UNITED STATES AND CANADIAN RAILWAYS - APRIL 1, 1861



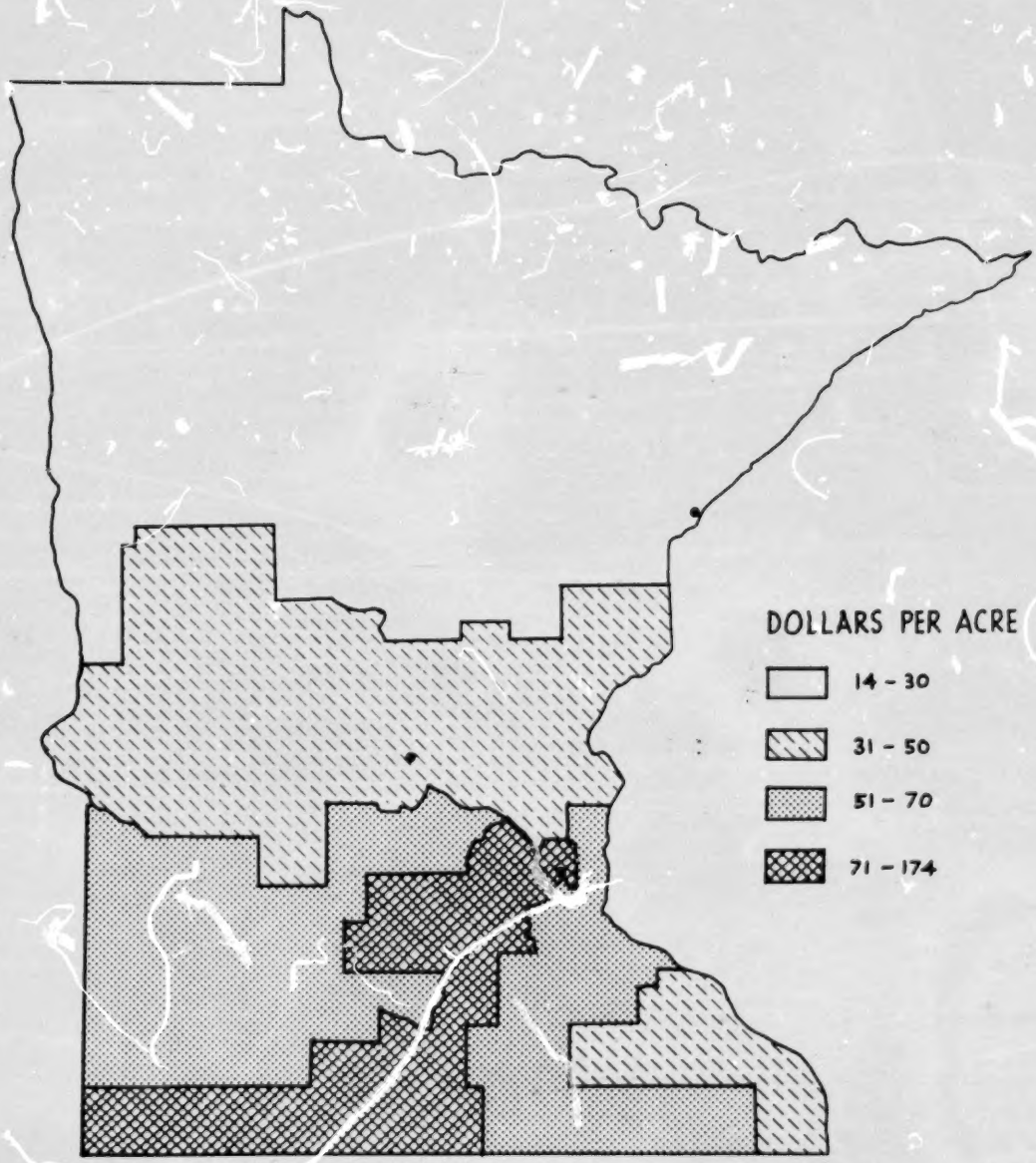
Map 14

LOCATION OF FARM PROTEST ACTIVITY



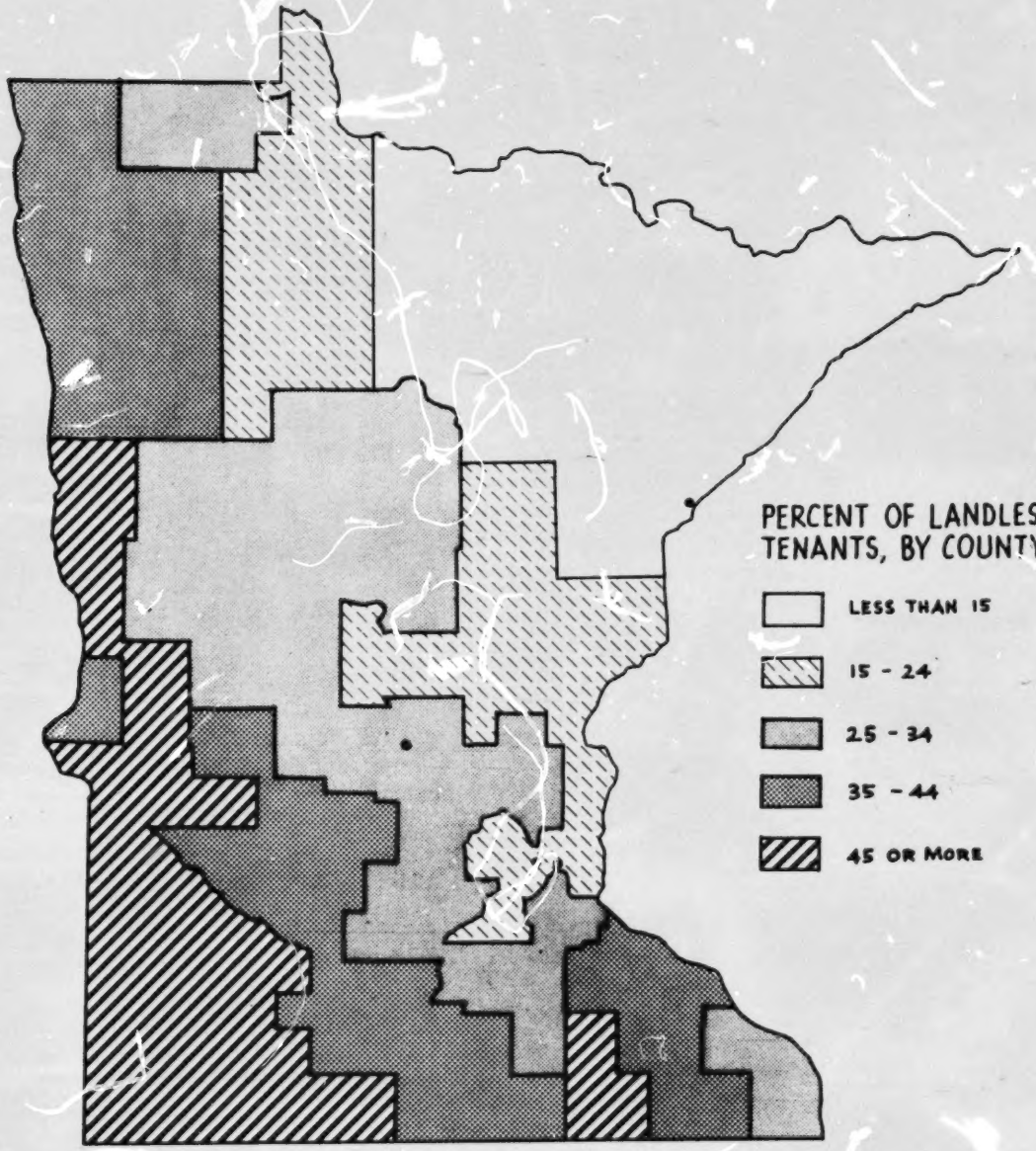
Map 15

LAND VALUES



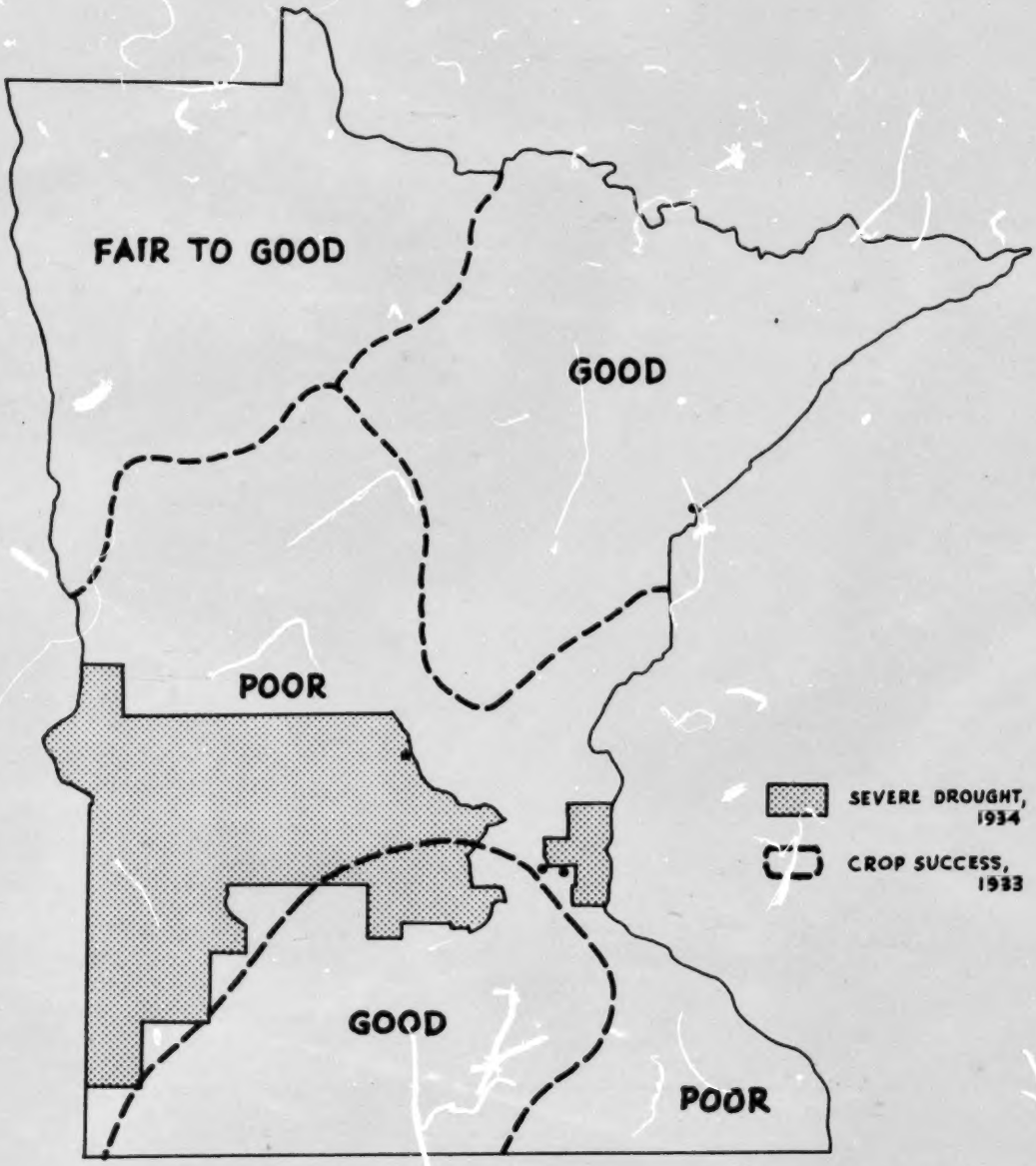
Map 16

RATES OF TENANCY



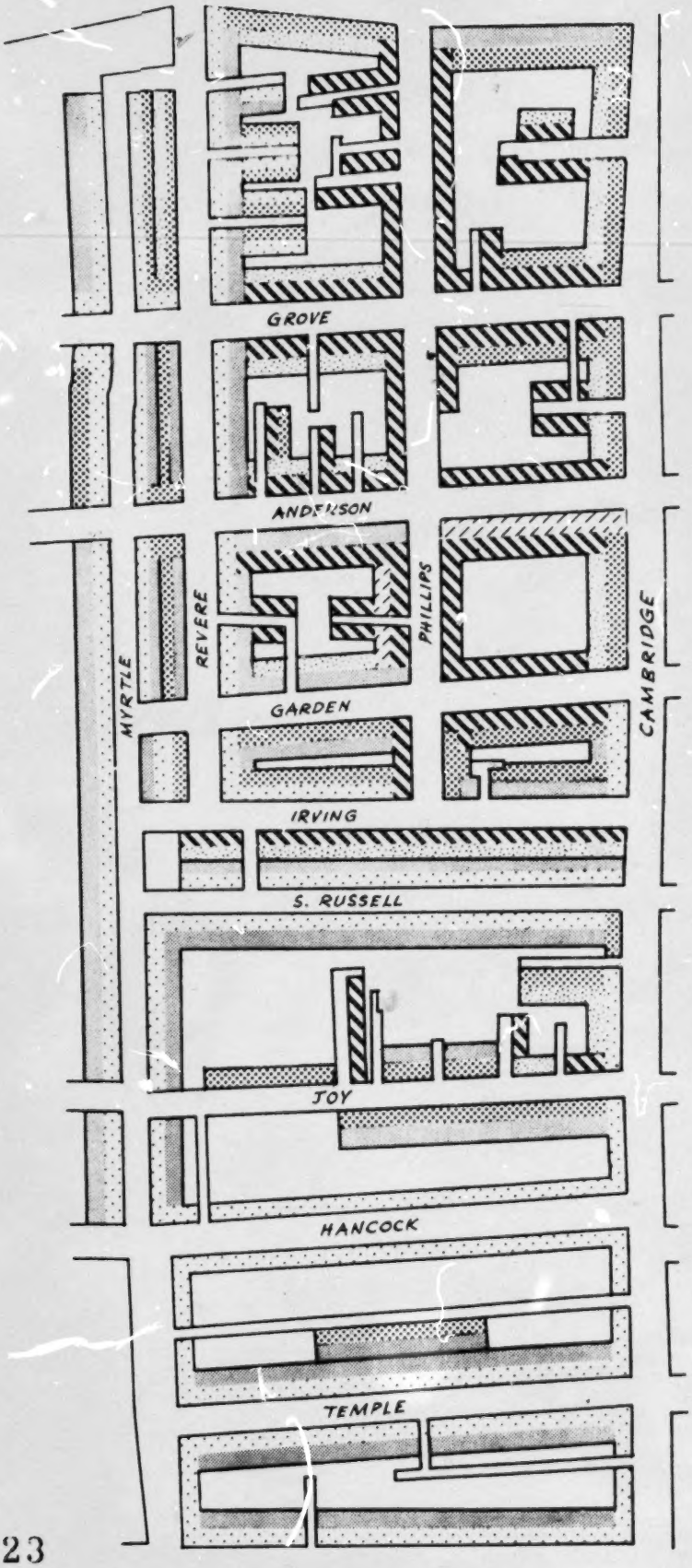
Map 17

CROP SUCCESS



Part of Boston's West End, 1900:

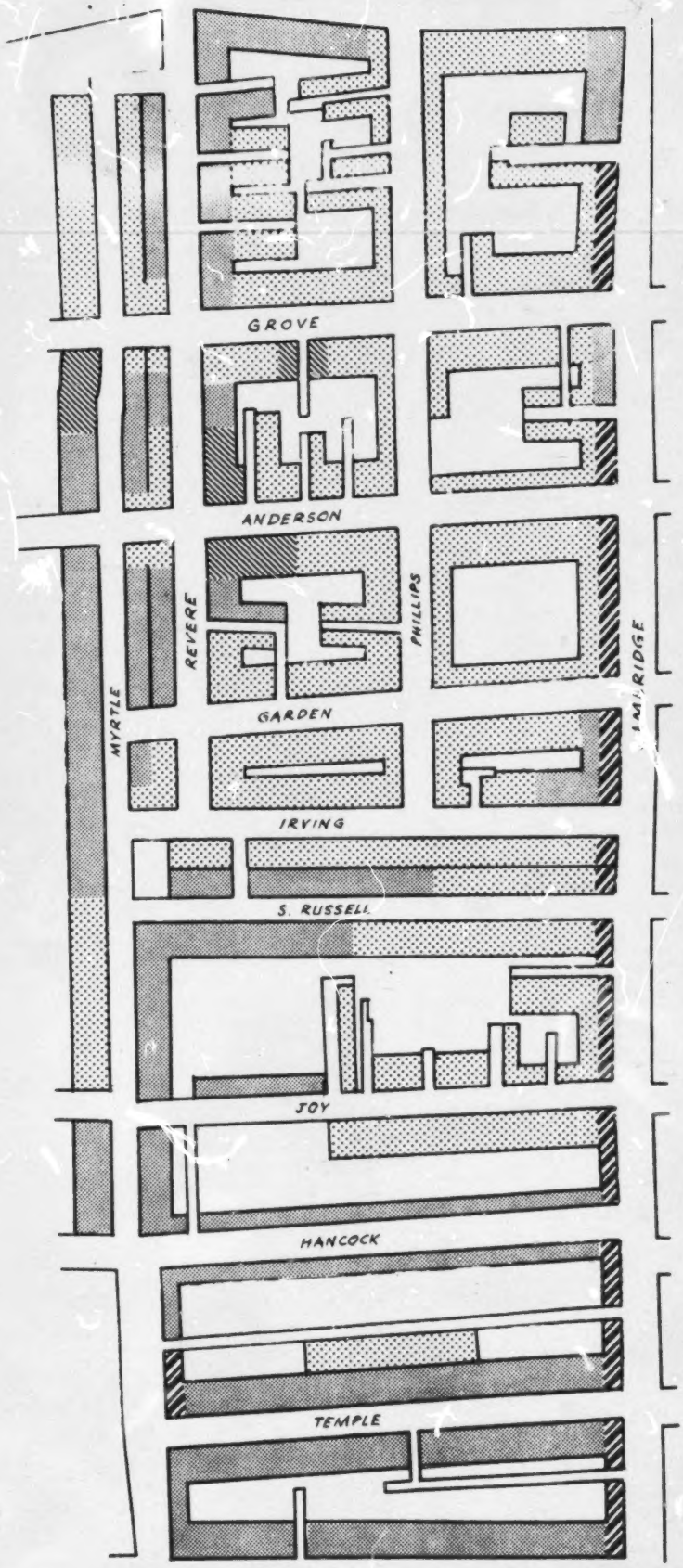
ETHNIC GROUPS



Map 19

Part of Boston's West End, 1900:

BUILDING TYPES



Part of Boston's West End, 1900:

OCCUPATIONS